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FILE COVERS 1907 - 19 Dec 2004 VOL 141 ISS 26
FILE LAST UPDATED: 17 Dec 2004 (20041217/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s (gm2(w)activator(w)protein#)/bi,ab
2172 GM2/BI
1671 GM2/AB
89127 ACTIVATOR/BI
67056 ACTIVATOR/AB
1964344 PROTEIN#/BI
1589357 PROTEIN#/AB
L1 103 (GM2(W)ACTIVATOR(W)PROTEIN#)/BI,AB

=> s l1 and (antibod? or monoclon? or polyclon?)/bi,ab
421309 ANTIBOD?/BI
363989 ANTIBOD?/AB
129496 MONOCLON?/BI
109075 MONOCLON?/AB
32479 POLYCLON?/BI
31618 POLYCLON?/AB
L2 7 L1 AND (ANTIBOD? OR MONOCLON? OR POLYCLON?)/BI,AB

=> s l2 not 2004/py
1071851 2004/PY
L3 6 L2 NOT 2004/PY

=> s l3 not 2003/py
1199596 2003/PY
L4 6 L3 NOT 2003/PY

=> s l4 not 2002/py
1147179 2002/PY
L5 6 L4 NOT 2002/PY

=> s l5 not 2001/py
1090609 2001/PY
L6 3 L5 NOT 2001/PY

=> d his

(FILE 'HOME' ENTERED AT 10:46:47 ON 19 DEC 2004)

FILE 'CAPLUS' ENTERED AT 10:46:52 ON 19 DEC 2004
L1 103 S (GM2(W)ACTIVATOR(W)PROTEIN#)/BI,AB
L2 7 S L1 AND (ANTIBOD? OR MONOCLON? OR POLYCLON?)/BI,AB
L3 6 S L2 NOT 2004/PY
L4 6 S L3 NOT 2003/PY
L5 6 S L4 NOT 2002/PY

L6 3 S L5 NOT 2001/PY

=> d l5 1-6 bib ab

L5 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:357574 CAPLUS Full-text
DN 136:336257

TI Human 14 kilodalton **GM2 activator protein**
-like protein, protein and cDNA sequences, recombinant
production and
therapeutic uses

IN Mao, Yumin; Xie, Yi
PA Bode Gene Development Co., Ltd., Shanghai, Peop. Rep. China
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 33 pp.
CODEN: CNXXEV

DT Patent
LA Chinese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.
DATE			

PI CN 1311225	A	20010905	CN 2000-111833
20000302			
WO 2001087915	A1	20011122	WO 2001-CN228
20010226			
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
AU 2001042245	A5	20011126	AU 2001-42245
20010226			
PRAI CN 2000-111833	A	20000302	
WO 2001-CN228	W	20010226	

AB The invention relates to a human **GM2 activator protein**-like protein, designated as **GM2 activator protein 14**. The open reading frame of the cDNA encodes a protein with 125 amino acids, and an estimated mol. weight of 14 kilodalton based on SDS-PAGE. The invention provides the use of polypeptide and polynucleotide in a method for treatment of various kinds of diseases, such as cancer, blood disease, HIV infection, immune diseases, inflammation, Sachs's disease, nervous system disease, embryogenesis related disease and retarded growth disease. The invention also relates to methods, expression vectors and host cells for recombinant production of said **GM2 activator protein**-like protein. The invention also relates to agonist and antagonist of said **GM2 activator protein**-like protein and uses in therapy. The invention found that the expression profile of said **GM2 activator protein**-like protein in some animal cell lines and tissues was similar to that of human **GM2 activator protein**.

L5 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:904516 CAPLUS Full-text
DN 136:32851
TI Protein and cDNA sequences of 8.8 kDa human **GM2 activator protein**-like and therapeutic use thereof

IN Mao, Yumin; Xie, Yi
PA Shanghai Biowindow Gene Development Inc., Peop. Rep. China
SO PCT Int. Appl., 34 pp.
CODEN: PIXXD2

DT Patent
LA Chinese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.
DATE			

PI WO 2001094579	A1	20011213	WO 2001-CN903
20010604			
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
CN 1326981	A	20011219	CN 2000-116370
20000607			
AU 2001081695	A5	20011217	AU 2001-81695
20010604			
PRAI CN 2000-116370	A	20000607	
WO 2001-CN903	W	20010604	

AB The invention provides protein and cDNA sequences for 8.8 kDa novel human protein cloned from fetal brain, and which has similar expression pattern with the human **GM2 activator protein**. The invention also relates to constructing **GM2 activator protein**-like gene expression vectors to prepare recombinant **GM2 activator protein**-like using prokaryote or eukaryote cells. Methods of expressing and preparing recombinant **GM2 activator protein**-like and its **antibody** are described. Methods of using **GM2 activator protein**-like or genes for the treatment of various kinds of diseases, such as cancer, blood diseases, HIV infection, immune diseases and inflammation are also disclosed.

L5 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:775265 CAPLUS Full-text
DN 136:132090
TI Investigation of differentially expressed genes during the development of mouse cerebellum
AU Kagami, Yoshihiro; Furuichi, Teiichi
CS Laboratory for Molecular Neurogenesis, Brain Science Institute, RIKEN, Wako, 351-0198, Japan
SO Gene Expression Patterns (2001), 1(1), 39-59
CODEN: GEPEAD; ISSN: 1567-133X
PB Elsevier Science B.V.
DT Journal
LA English
AB Before the discovery of DNA microarray and DNA chip technol., the expression of only a small number of genes could be analyzed at a time. Currently, such technol. allows us the simultaneous anal. of a large number of genes to systematically monitor their expression patterns that may be associated with various biol. phenomena. We utilized

the Affymetrix GeneChip Mu11K to analyze the gene expression profile in developing mouse cerebellum to assist in the understanding of the genetic basis of cerebellar development in mice. Our anal. showed 81.6% (10.321/12.654) of the genes represented on the GeneChip were expressed in the postnatal cerebellum, and among those, 8.7% (897/10.321) were differentially expressed with more than a two-fold change in their maximum and min. expression levels during the developmental time course. Further anal. of the differentially expressed genes that were clustered in terms of their expression patterns and the function of their encoded products revealed an aspect of the genetic foundation that lies beneath the cellular events and neural network formation that takes place during the development of the mouse cerebellum.

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L5 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1998:717822 CAPLUS [Full-text](#)

DN 130:64025

TI Location of ganglioside **GM2 activator protein** gene expression in sheep

AU Butkus, A.; Coghlan, J. P.

CS Department of Anatomy and Cell Biology, University of Melbourne, Parkville, 3052, Australia

SO Clinical and Experimental Pharmacology and Physiology (1998), 25(Suppl.,

Future Perspectives in Molecular Endocrinology), S28-S33

CODEN: CEXPB9; ISSN: 0305-1870

PB Blackwell Science Asia Pty Ltd.

DT Journal

LA English

AB The present study was aimed at characterizing and establishing the site of production of a "novel" protein isolated in 1988 during the course of studies on sheep renal morphol. This protein has subsequently been identified as the **GM2 activator protein** (GM2AP). The "novel" protein, with an apparent mol. weight of 18-22 kDa and a pI between 4.7 and 4.9, was isolated from enriched granular fractions of sheep kidney cortex using two-dimensional (2-D) polyacrylamide gel electrophoresis. Following electroelution, the N-terminal amino acid sequence was determined and, applying the preferred codon usage formula, an oligodeoxyribonucleotide probe was constructed for examination of sites of expression of this novel protein using northern analyses and hybridization histochem. Western blots of the 2-D gels onto nitrocellulose membranes permitted the authors to select the appropriate spots for injection into rabbits for production of **polyclonal antibodies**. The **antibodies** were used to confirm the sites of protein production using immunohistochem. Northern analyses revealed that GM2AP mRNA has a widespread distribution in ovine tissues. In the kidney, GM2 was expressed in all major renal arteries and arterioles. In the liver, the expression of the gene was prominent in the hepatic vein and ducts. **Antibodies** raised against the GM2AP confirmed that the protein was present at the same sites as the mRNA. These are the first studies showing the location of GM2 activator gene expression in normal mammalian tissues. The arterial site of production has implications for local action or an important role in membrane integrity throughout the kidney.

RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:880375 CAPLUS [Full-text](#)

DN 123:279548

TI Specific recognition of N-acetylneuraminic acid in the GM2 epitope by

human **GM2 activator protein**

AU Li, Su-Chen; Wu, Yan-Yun; Sugiyama, Eiko; Taki, Takao; Kasama, Takeshi;

Casellato, Riccardo; Sonnino, Sandro; Li, Yu-Teh

CS Dep. Biochemistry, Tulane Univ. School medicine, New Orleans, LA, 70112, USA

SO Journal of Biological Chemistry (1995), 270(41), 24246-51

CODEN: JBCHA3; ISSN: 0021-9258

PB American Society for Biochemistry and Molecular Bio logy

DT Journal

LA English

AB GM2 Activator is a low mol. wt. protein cofactor that stimulates the enzymic conversion of GM2 into GM3 by human β -hexosaminidase A and also the conversion of GM2 into GA2 by clostridial sialidase. Among the five known activator proteins for the enzymic hydrolysis of glycosphingolipids, only GM2 activator is effective in stimulating the hydrolysis of GM2. However, the mechanism of action of GM2 activator is still not well understood. Using a unique disialosylganglioside, GalNAc-GD1a, as the substrate, we were able to show that in the presence of GM2 activator, GalNAc-GD1a was specifically converted into GalNAc-GM1a by clostridial sialidase, while in the presence of saposin B, a nonspecific activator protein, GalNAc-GD1a was converted into both GalNAc-GM1a and GalNAc-GM1b. Individual products generated from GalNAc-GD1a by clostridial sialidase were identified by thin layer chromatog., neg. secondary ion mass spectrometry, and immunostaining with a **monoclonal** IgM that recognizes the GM2 epitope. Our results clearly show that GM2 activator recognizes the GM2 epitope in GalNAc-GD1a. Thus, GM2 activator may interact with the trisaccharide structure of the GM2 epitope and render the GalNAc and NeuAc residues accessible to β -hexosaminidase A and sialidase, resp.

L5 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:653208 CAPLUS [Full-text](#)

DN 123:51485

TI Identification of a lysosomal protein causing lipid transfer, using a

fluorescence assay designed to monitor membrane fusion between rat liver endosomes and lysosomes

AU Kuwana, Tomomi; Mullock, Barbara M.; Luzio, J. Paul

CS Dep. Clinical Biochemistry, Univ. Cambridge, Cambridge, CB2 2QR, UK

SO Biochemical Journal (1995), 308(3), 937-46

CODEN: BIJOAK; ISSN: 0264-6021

PB Portland Press

DT Journal

LA English

AB In the present and previous studies (Mullock, B. M. et al., 1994) the authors attempted to investigate endosome-lysosome fusion using an assay based on the dilution of the self-quenching fluorescent lipid probe octadecylrhodamine. Although some characteristics of fluorescence dequenching were consistent with those observed in other cell-free assays, the authors now demonstrated that increased fluorescence was due to leakage of an intralysosomal lipid-transfer protein. This protein was purified and found to be a 22 kDa mol. with sequence, immunol. and functional characteristics strongly suggesting that it is the rat

homolog of human **GM2-activator protein**. Both the 22 kDa protein and recombinant human **GM2-activator protein** caused fluorescence dequenching either when mixed with octadecylrhodamine-loaded endosomes and lysosomal membranes or in a liposome system. The data were consistent with **GM2-activator protein** acting as an octadecylrhodamine- transfer protein. **Antibodies** to the 22 kDa protein added to cell-free endosome-lysosome content-mixing assays had no effect, although they could inhibit fluorescence dequenching caused by the protein. Thus this protein is not required in any fusion event involved in delivery of ligands from endosomes to lysosomes. The existence within an intracellular organelle of a protein capable of acting as an octadecylrhodamine-transfer protein suggests the need for caution in the interpretation of fluorescence-dequenching assays using mammalian subcellular fractions.

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L1 103 S (GM2(W)ACTIVATOR(W)PROTEIN#)/BI,AB
L2 7 S L1 AND (ANTIBOD? OR MONOCLON? OR
POLYCLON?)/BI,AB
L3 6 S L2 NOT 2004/PY
L4 6 S L3 NOT 2003/PY
L5 6 S L4 NOT 2002/PY
L6 3 S L5 NOT 2001/PY

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L2	202154	antibody or polyclon\$ or monoclon\$	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/12/19 10:44
L3	14	l1 and l2	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/12/19 10:44